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10/555,064	10/28/2005	Takeshi Azami	Q90665	9159
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EXAMINER DANIELS, MATTHEW J				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/555,064

**Applicant(s)**

AZAMI ET AL.

**Examiner**

MATTHEW J. DANIELS

**Art Unit**

1791

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 January 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 8-12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 13-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_\_

## DETAILED ACTION

### *Double Patenting*

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

1. Claims 1-8 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-7 of copending Application No. 10/568386. Although the conflicting claims are not identical, they are not patentably distinct from each other for the following reasons:

Instant Claim 1 recites a target holding unit for a sheet-like or rod-shaped graphite target, a light source to irradiate the target, a moving unit, and a collecting unit. However, Claim 1 of the '386 application also recites a target holding unit, a light source, a moving unit, and a recovery or collecting unit. While Claim 1 of the '386 application does not expressly disclose a sheet-like or rod-shaped target, these aspects of the invention are claimed in claims 2 and 3. As

to instant Claims 2-8, since the same sheet-like and rod-like holder is claimed in the '386 application, it is submitted that the structure would have inherently fulfilled the limitations of instant Claims 2-8 which require particular methods of operating the structure already claimed. Additionally, the constant irradiation angle of Claim 2 is claimed in Claim 5 of the '386 application. The graphite target disappearance of Claim 3 would be implicit in the target holder having rollers recited in Claim 3 of the '386 application. The power density is not claimed as variable in the '386 application, and therefore the limitations of instant Claim 4 would have been obvious over claims of the '386 application since a constant value would have been obvious. As to Claims 5-7, the roller configuration of Claim 3 of the '386 application would have provided the claimed limitations of Claims 5 and 6 because a moving unit could be operated to rotate between rollers or to reel out target material. As to Claim 8, the material produced does not materially affect the apparatus, but nevertheless it is submitted that the "assemblies" of Claim 7 of the '386 application would render obvious the claimed "aggregates."

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

2. Claims 1-5 and 8 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 and 2 of copending Application No. 10/566,579 in view of Iijima (Chemical Physics Letters, Vol. 309 (1999) pages 165-170). Although the conflicting claims are not identical, they are not patentably distinct from each other for the following reasons:

Instant Claim 1 recites a target holding unit for a sheet-like or rod-shaped graphite target, a light source to irradiate the target, a moving unit, and a collecting unit. However, Claims 1 and 2 of the '579 application also recites a light source, and a recovery or collecting unit. Additionally, Iijima teaches a nanocarbon production apparatus comprising a target holding unit which holds and rotates a rod-shaped graphite target (page 166, left col., lines 10-20), a laser light source which irradiates a surface of said graphite target with light (page 166, left col., lines 16-20), a moving unit which moves said graphite target held by said target holding unit relative to the light source to move an irradiation position of said light in the surface of said graphite target (page 166, left col., line 16), and a collecting unit for collecting nanocarbon evaporated from the graphite target by irradiation with light (filter, page 166, left col., lines 21-27). It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the method of Iijima into that of the '579 application because the Iijima reference represents improvements which would have also been desirable in the '579 application, and therefore one would have found it obvious to provide the same improvements in the '579 application to achieve the same benefits. As to instant Claims 2-5 and 8, since the same rod-like holder is claimed in the Iijima reference, it is submitted that the structure would have inherently fulfilled the limitations of instant Claims 2-4 and 8 which require particular methods of operating the structure already claimed.

3. Claims 1-4 and 8 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 4, 16, 18 of copending Application

No. 10/560,593. Although the conflicting claims are not identical, they are not patentably distinct from each other for the following reasons:

Instant Claim 1 recites a target holding unit for a sheet-like or rod-shaped graphite target, a light source to irradiate the target, a moving unit, and a collecting unit. However, Claims 1, 4, and 8 of the '593 application also recites a target holding unit, a light source, a moving unit, and a recovery or collecting unit. While Claim 1 of the '593 application does not expressly disclose a sheet-like or rod-shaped target, the rod target is claimed in Claim 8 of that application. As to instant Claims 2-4 and 8, since the same rod-like holder is claimed in the '386 application, it is submitted that the structure would have inherently fulfilled the limitations of instant Claims 2-4 and 8 which require particular methods of operating the structure already claimed. Additionally, as to Claims 2 and 4, the '593 application does not require adjustment of the irradiation angle or the power density, and therefore it is submitted that it would have been obvious to keep these conditions constant during the process. As to Claim 3, the rotating rod of Claim 8 would provide a spot which disappears in the claimed manner. As to Claim 8, see Claim 9 of the '593 application.

4. Claims 1-4 and 8 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-6 and 8-15 of copending Application No. 10/556,088. Although the conflicting claims are not identical, they are not patentably distinct from each other for the following reasons:

Instant Claim 1 recites a target holding unit for a sheet-like or rod-shaped graphite target, a light source to irradiate the target, a moving unit, and a collecting unit. However, Claims 1 and

15 of the '088 application also recites a target holding unit, a light source, a moving unit, and a recovery or collecting unit. While Claim 1 of the '088 application does not expressly disclose a sheet-like or rod-shaped target, the rod target is claimed in Claim 15 of that application. As to instant Claims 2-4 and 8, since the same rod-like holder is claimed in the '088 application, it is submitted that the structure would have inherently fulfilled the limitations of instant Claims 2-4 and 8 which require particular methods of operating the structure already claimed. Additionally, as to Claims 2 and 4, the '088 application does not require adjustment of the irradiation angle or the power density, and therefore it is submitted that it would have been obvious to keep these conditions constant during the process. As to Claim 3, the rotating rod of Claim 15 of the '088 application would provide a spot which disappears in the claimed manner. As to Claim 8, the '088 application would inherently be capable of forming aggregates in the claimed manner.

5. Claims 1-4 and 8 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-6 and 8-15 of copending Application No. 10/544,400. Although the conflicting claims are not identical, they are not patentably distinct from each other for the following reasons:

Instant Claim 1 recites a target holding unit for a sheet-like or rod-shaped graphite target, a light source to irradiate the target, a moving unit, and a collecting unit. However, Claim 1 of the '400 application also recites a target holding unit, a light source, a moving unit, and a recovery or collecting unit. As to instant Claims 2-4 and 8, since the same rod-like holder is claimed in the '400 application, it is submitted that the structure would have inherently fulfilled the limitations of instant Claims 2-4 and 8 which require particular methods of operating the

structure already claimed. Additionally, as to Claims 2 and 4, the '400 application does not require adjustment of the irradiation angle or the power density, and therefore it is submitted that it would have been obvious to keep these conditions constant during the process. As to Claim 3, the rotating rod of Claim 2 of the '400 application would provide a spot which disappears in the claimed manner. As to Claim 8, the '400 application would inherently be capable of forming aggregates in the claimed manner.

6. Claims 1-4 and 8 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-6 and 8-15 of copending Application No. 10/544,133. Although the conflicting claims are not identical, they are not patentably distinct from each other for the following reasons:

Instant Claim 1 recites a target holding unit for a sheet-like or rod-shaped graphite target, a light source to irradiate the target, a moving unit, and a collecting unit. However, Claims 2 and 3 of the '133 application also recite a target holding unit for a sheet or rod which also functions as a target moving unit, a light source, and a recovery or collecting unit. As to instant Claims 2-4 and 8, since the same holder is claimed in the '133 application, it is submitted that the structure would have inherently fulfilled the limitations of instant Claims 2-4 and 8 which require particular methods of operating the structure already claimed. Additionally, as to Claims 2 and 4, the '133 application does not require adjustment of the irradiation angle or the power density, and therefore it is submitted that it would have been obvious to keep these conditions constant during the process. As to Claim 3, the rotating rod of Claim 2 of the '133 application would



provide a spot which disappears in the claimed manner. As to Claim 8, the '133 application would inherently be capable of forming aggregates in the claimed manner.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claims 1, 2, 5, 8, and 13** are rejected under 35 U.S.C. 103(a) as being unpatentable over Iijima (Chemical Physics Letters, Vol. 309 (1999) pages 165-170) in view of Bailey (US 3,284,372). **As to Claim 1**, However, Iijima teaches a nanocarbon production apparatus comprising a target holding unit which holds and rotates a rod-shaped graphite target (page 166, left col., lines 10-20), a laser light source which irradiates a surface of said graphite target with light (page 166, left col., lines 16-20), a moving unit which moves said graphite target held by said target holding unit relative to the light source to move an irradiation position of said light in the surface of said graphite target (page 166, left col., line 16), and a collecting unit for collecting nanocarbon evaporated from the graphite target by irradiation with light (filter, page 166, left col., lines 21-27).

Although Iijima does not specifically teach that a target holding unit and moving unit are present, because Iijima teaches that the target is rotated and advanced, it would have been inherent that target holding unit and moving unit are present. In the alternative, however, it

would have been obvious to provide a target holding unit and moving unit in view of Iijima's clear suggestion to provide rotating and moving actions.

Since Iijima suggests a cylindrical target, Iijima is silent to the sheet-like or quadratic prism graphite target. However, in a first interpretation, this limitation relates merely to the shape of a portion of an apparatus already disclosed by Iijima. There is no indication that the instant shape would have been unobvious over that disclosed by Iijima. Additionally, Bailey teaches that it is known to provide graphite rods in a variety of configurations, such as in a round configuration (Fig. 10a), or in a quadratic prism configuration (Fig. 10b). Other configurations, such as square cross sections, were also known (4:25-30).

It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the square or rectangular rod of Bailey into that of Iijima because one using the apparatus of Iijima would have recognized many different graphite target shapes as interchangeable or substitutable to provide an ablatable graphite source, and Bailey teaches that both cylindrical and square shapes can be produced in the same machine.

**As to Claims 2 and 5**, it is submitted that because Iijima advances the graphite rod along its axis without any description of changing the irradiation angle, that it would have been inherent that a moving unit which moves the graphite in a translational manner was present. In the alternative, Iijima clearly suggests advancing the graphite while rotating it, thus suggesting that a translational moving unit should be used. **As to Claim 8**, it is submitted that in an apparatus claim, the material produced by the apparatus should be given little patentable weight. However, Iijima teaches nanohorn aggregates (title). **As to Claim 13**, one of ordinary skill in the art would have found it obvious to provide multiple sizes of laser spot sizes and graphite target

diameters in the Iijima process. Additionally, the particular laser irradiation diameter is a process variable that does not appear to limit the claimed apparatus.

8. **Claims 3 and 4** are rejected under 35 U.S.C. 103(a) as being unpatentable over Iijima (Chemical Physics Letters, Vol. 309 (1999) pages 165-170) in view of Bailey (US 3,284,372), and further in view of Wiler (US 5478426). Iijima and Bailey teach the subject matter of Claim 1 above under 35 USC 103(a). **As to Claim 3**, method limitation are not limiting on the claimed apparatus. Iijima provides a disappearing graphite, referred to by Iijima as laser ablation (page 166, left column). Iijima is silent to the moving unit moving the irradiation position of the light. Iijima appears to disclose a stationary beam and rotating target. However, use of a stationary target and a rotating beam would have been an obvious substitute or alternative since doing so would provide the same action, namely exposure of fresh material to the laser beam. For example, Wiler teaches that it is known to provide a technique similar to Iijima where the target is rotated and ablated with a stationary beam (Fig. 6), and in the alternative, to use a target with a robotically controlled laser (Fig. 8) such that the laser can be impinged on nearly any surface of the article (8:47-61). It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the apparatus of Wiler into that of Iijima because (a) Iijima suggests that it is desirable to continuously expose new target material to the laser, and Wiler teaches a system which would provide the suggested capability, or (b) one of ordinary skill in the art at the time of the invention would have viewed the Wiler apparatus as a substitutable laser ablation control system for the Iijima apparatus which provides the additional benefits of computer control of laser movement, laser power, and target movement. **As to Claim 4**, in the

Iijima apparatus which has the capability to rotate, advance, and ablate the graphite target, because the rotation is controlled to 6 rpm (page 166, left col.) and there is no suggestion to change the power density, it is submitted that the claimed apparatus is provided. In the alternative that the constant rotation of the target of Iijima cannot be considered to teach or suggest a control unit and constant power density, Wiler teaches that movement of the target or the laser and the laser power are controlled by a control unit ( a microprocessor, 7:2-28), and thus they have the claimed capabilities. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the apparatus of Wiler into that of Iijima for the reasons set forth above with respect to Claim 3.

9. **Claims 14 and 15** are rejected under 35 U.S.C. 103(a) as being unpatentable over Iijima (Chemical Physics Letters, Vol. 309 (1999) pages 165-170) in view of Bailey (US 3,284,372), and further in view of Perry (US 6,372,103). Iijima and Bailey teach the subject matter of Claim 1 above under 35 USC 103(a). **As to Claims 14 and 15**, Iijima is silent to the claimed irradiation angle. However, Perry teaches that in using a rotating graphite rod (3:18-19), it is conventional to use a beam impinging on the rod at 45 degrees (3:19-21). It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the impingement angle of Perry into the Iijima process because (a) the Perry process is a comparable process to the Iijima reference and one of ordinary skill in the art would have found it obvious to apply the Perry improvement to the Iijima process in order to provide the ability to direct the resulting plume in a desired direction (3:10-33).

10. **Claims 1, 6, and 7** are rejected under 35 U.S.C. 103(a) as being unpatentable over Iijima (Chemical Physics Letters, Vol. 309 (1999) pages 165-170) in view of Davanloo (US 5411797).

**As to Claim 1**, Iijima teaches a nanocarbon production apparatus comprising a target holding unit which holds and rotates a rod-shaped graphite target (page 166, left col., lines 10-20), a laser light source which irradiates a surface of said graphite target with light (page 166, left col., lines 16-20), a moving unit which moves said graphite target held by said target holding unit relative to the light source to move an irradiation position of said light in the surface of said graphite target (page 166, left col., line 16), and a collecting unit for collecting nanocarbon evaporated from the graphite target by irradiation with light (filter, page 166, left col., lines 21-27).

Since Iijima suggests a cylindrical target, Iijima is silent to the sheet-like graphite target and the target holding unit and moving unit. However, Davanloo teaches that it is known to provide a sheet-like graphite target and rotating it with rolls (9:38-63). Davanloo meets the structural limitations of the two rolls, and one of ordinary skill would have found it obvious to use a continuous belt around the two rolls of Davanloo instead of the roll-to-roll configuration since a belt is a continuous embodiment of a reel-to-reel configuration. One would have found it obvious to provide a continuous belt since doing so would provide the ability to operate continuously without changing or rewinding the belt of Davanloo. It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the method of Davanloo into that of Iijima because (a) Iijima suggests using a graphite target that advances (page 166, left column) and Davanloo teaches a graphite target which advances to provide fresh target material to the laser beam, which avoids cratering in the target and a

reduction in power density (Davanloo, 9:51-55), or (b) Iijima suggests a target which advances and Davanloo teaches a target which advances in a different way for substantially the same purpose such that one of ordinary skill in the art would view the Davanloo target to be a substitutable element for that of Iijima.

**As to Claim 6**, Iijima is silent to the belt device. However, Davanloo teaches that it is known to provide a sheet-like graphite target and rotating it with rolls (9:38-63). Davanloo meets the structural limitations of the two rolls, and one of ordinary skill would have found it obvious to use a continuous belt around the two rolls of Davanloo instead of the roll-to-roll configuration since a belt is a continuous embodiment of a reel-to-reel configuration. One would have found it obvious to provide a continuous belt since doing so would provide the ability to operate continuously without changing or rewinding the belt of Davanloo. It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the method of Davanloo into that of Iijima because (a) Iijima suggests using a graphite target that advances (page 166, left column) and Davanloo teaches a graphite target which advances to provide fresh target material to the laser beam, which avoids cratering in the target and a reduction in power density (Davanloo, 9:51-55), or (b) Iijima suggests a target which advances and Davanloo teaches a target which advances in a different way for substantially the same purpose such that one of ordinary skill in the art would view the Davanloo target to be a substitutable element for that of Iijima. **As to Claim 7**, Davanloo teaches a sheet-like graphite target wound about a rotating body (Fig. 1, items 32 and 34). Since the rotating body rotates, it would be configured to push out the graphite target released from the rotating body toward the direction of the irradiation position.

***Response to Arguments***

11. Applicant's arguments filed 7 January 2009 have been fully considered but they are not persuasive or are moot in view of the new grounds of rejection above. The arguments appear to be on the following grounds:

a) Claim 1 recites the graphite target having a sheet-like or quadratic prism shape, which improves the efficiency. One would not have found it obvious to produce a target with a sheet like prism shape in view of Iijima's disclosure of a rotating target rod.

b) Other claims are patentable by their dependence on Claim 1.

12. These arguments are not persuasive or moot for the following reasons:

a) New rejections are set forth above. A reference with a sheet target was applied previously (Davanloo), and does not appear to be particularly argued. Therefore, in view of the change in scope in Claim 1, Davanloo now forms the basis of a second rejection under 35 USC 103(a). Additionally, it is unclear that the shape of the target (quadratic prism) is distinguishing to the apparatus. Changes in size and shape are generally obvious to the ordinary artisan. Multiple target shapes would have been obvious, and any unexpected result is not set forth by way of declaration.

b) Rejections have been revised or other references set forth above.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **MATTHEW J. DANIELS** whose telephone number is (571)272-2450. The examiner can normally be reached on Monday - Friday, 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on (571) 272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Matthew J. Daniels/  
Primary Examiner, Art Unit 1791  
3/20/09